

Volume Contents

Vol. 26, No. 1, January 1995

Segmental Independence and Age Dependence of Neurite Outgrowth from Embryonic Chick Sensory Neurons / 1
Simon H. Parson and Richard R. Ribchester

Birth Times of Neurons in Labellar Taste Sensilla of the Blowfly *Phormia regina* / 17
Gerald S. Pollack and Reinhard Lakes-Harlan

Dual Pathways for Tactile Sensory Information to Thoracic Interneurons in the Cockroach / 33
Alan J. Pollack, Roy E. Ritzmann, and James T. Watson

Ethanol Influences on the Chick Embryo Spinal Cord Motor System: Analyses of Motoneuron Cell Death, Motility, and Target Trophic Factor Activity and *In Vitro* Analyses of Neurotoxicity and Trophic Factor Neuroprotection / 47
Marieta B. Heaton and Douglas M. Bradley

Dorsal Patterning of the Avian Mesencephalon/Metencephalon: Role of the Notochord and Floor Plate in Suppressing *Engrailed-2* / 62
Diana K. Darnell and Gary C. Schoenwolf

Telencephalic and Diencephalic Origin of Radial Glial Processes in the Developing Preoptic Area/Anterior Hypothalamus / 75
Stuart A. Tobet, Raul G. Paredes, Troy W. Chickering, and Michael J. Baum

Differential Estrogen Accumulation among Populations of Projection Neurons in the Higher Vocal Center of Male Canaries / 87
Frank Johnson and Sarah W. Bottjer

Spontaneous Bursting and Long-Living Local Correlation in Normal and Denervated Tectum of Goldfish / 109
Alvin W. Lyckman and Ronald L. Meyer

Apolipoprotein III Is Dramatically Up-Regulated during the Programmed Death of Insect Skeletal Muscle and Neurons / 119
Danhui Sun, Rolf Ziegler, Carolanne E. Milligan, Susan Fahrbach, and Lawrence M. Schwartz

Effects of Experience and Juvenile Hormone on the Organization of the Mushroom Bodies of Honey Bees / 130
G. S. Withers, S. E. Fahrbach, and G. E. Robinson

Differential Induction of the *ZENK* Gene in the Avian Forebrain and Song Control Circuit after Metrazole-Induced Depolarization / 145
Claudio V. Mello and David F. Clayton

Vol. 26, No. 2, February 1995

A Direct Comparison of the Masculinizing Effects of Testosterone, Androstenedione, Estrogen, and Progesterone on the Development of the Zebra Finch Song System / 163

William Grisham and Arthur P. Arnold

Embryonic Fibronectins Are Up-Regulated following Peripheral Nerve Injury in Rats / 171

Greta A. Mathews and Charles ffrench-Constant

Development of Wing Sensory Axons in the Central Nervous System of *Drosophila* during Metamorphosis / 189

Kathleen E. Whitlock and John Palka

Suppression of Programmed Neuronal Death by a Thapsigargin-Induced Ca^{2+} Influx / 205

Patricia A. Lampe, Ellen B. Cornbrooks, Anna Juhasz, Eugene M. Johnson, Jr., and James L. Franklin

The Canary Androgen Receptor mRNA Is Localized in the Song Control Nuclei of the Brain and Is Rapidly Regulated by Testosterone / 213

Kent L. Nastiuk and David F. Clayton

Axotomy of Developing Rat Spinal Motoneurons: Cell Survival, Soma Size, Muscle Recovery, and the Influence of Testosterone / 225

Jane L. Lubischer and Arthur P. Arnold

Lectin Binding Distinguishes between Neuroendocrine and Neuronal Derivatives of the Sympathoadrenal Neural Crest / 241

David M. Katz, Melissa E. White, and Alison K. Hall

Calcium-Activated Proteolysis of Neurofilament Proteins in Goldfish Mauthner Axons / 253

Tim D. Raabe, Tri Nguyen, and George D. Bittner

Collagen Synthesis Inhibition Reduces Clustering of Heparan Sulfate Proteoglycan and Acetylcholine Receptors but Not Agrin or p65, at Neuromuscular Contacts

In Vitro / 262

John L. Bixby

Synapse Elimination, the Size Principle, and Hebbian Synapses / 273

Jes Stollberg

A Human Glial Hybrid Cell Line Differentially Expressing Genes Subserving Oligodendrocyte and Astrocyte Phenotype / 283

JoAnne McLaurin, Geralyn C. Trudel, Ivan T. Shaw, Jack P. Antel, and Neil R. Cashman

Special Issue

ACTIVITY-DEPENDENT FORMS OF PLASTICITY

Activity-Dependent Forms of Plasticity / 295
Yehezkel Ben-Ari

I. DEVELOPMENTAL PLASTICITY

The Role of Receptor/Channel Activity in Neuronal Cell Migration / 299
Pasko Rakic and Hitoshi Komuro

Spontaneous Calcium Transients Regulate Neuronal Plasticity in Developing Neurons / 316
Nicholas C. Spitzer, Eric Olson, and Xiaonan Gu

The Ca^{2+} Influx Induced by β -Amyloid Peptide 25–35 in Cultured Hippocampal Neurons Results from Network Excitation / 325
James R. Brorson, Vytautas P. Bindokas, Toshi Iwama, Charles J. Marcuccilli, Jane C. Chisholm, and Richard J. Miller

Postnatal Maturation of Gamma-Aminobutyric acid_A and B-Mediated Inhibition in the CA3 Hippocampal Region of the Rat / 339
Jean-Luc Gaiarsa, Heather McLean, Patrice Congar, Xavier Leinekugel, Rustem Khazipov, Vadim Tseeb, and Yehezkel Ben-Ari

Lamina-Specific Synaptic Connections of Hippocampal Neurons *In Vitro* / 350
M. Frotscher and B. Heimrich

II. EXCITATORY AMINO ACIDS AND LONG-TERM POTENTIATION

Multiple Forms of Long-Term Potentiation and Multiple Regulatory Sites of N-Methyl-D-Aspartate Receptors: Role of the Redox Site / 360
H. Gozlan, R. Khazipov, and Y. Ben-Ari

Posttetanic Potentiation and Presynaptically Induced Long-Term Potentiation at the Mossy Fiber Synapse in Rat Hippocampus / 370
Ronald B. Langdon, Jon W. Johnson, and German Barrionuevo

Fast and Slow Excitation of Inhibitory Cells in the CA3 Region of the Hippocampus / 386
Jean-Christophe Poncer and Richard Miles

Possible Strategies for Finding the Substrate for Learning-Induced Changes in the Hippocampal Cortex / 396
Per Andersen and Mari Trommald

III. REACTIVE PLASTICITY AND NEOSYNAPTOGENESIS

Fos: An Immediate-Early Transcription Factor in Neurons / 403
Tom Curran and James I. Morgan

Cell Death, Gliosis, and Synaptic Remodeling in the Hippocampus of Epileptic Rats / 413

Alfonso Represa, Jérôme Niquet, Hélène Pollard, and Yehezkel Ben-Ari

Molecular Correlates between Reactive and Developmental Plasticity in the Rat Hippocampus / 426

Michel Khrestchatsky, Lotfi Ferhat, Gérard Charton, Anne Bernard, Hélène Pollard, Alfonso Represa, and Yehezkel Ben-Ari

The Neural Cell Adhesion Molecule and Synaptic Plasticity / 437

Patrick Doherty, Mohammed S. Fazeli, and Frank S. Walsh

mRNA Distribution within Dendrites: Relationship to Afferent Innervation / 447

Oswald Steward and Christopher S. Wallace

Vol. 26, No. 4, April 1995

Developmental Expression of Heterotrimeric G Proteins in the Nervous System of *Manduca sexta* / 461

P. F. Copenhaver, A. M. Horgan, D. C. Nichols, and M. A. Rasmussen

Plasticity in Cultured Carotid Body Chemoreceptors: Environmental Modulation of GAP-43 and Neurofilament / 485

Adele Jackson and Colin Nurse

Role of the Transforming Growth Factor- β Family in the Expression of Cranial Neural Crest-Specific Phenotypes / 497

Gabrielle G. Leblanc, Timothy E. Holbert, and Tristan Darland

A Motoneuron Spared from Steroid-Activated Developmental Death by Removal of Descending Neural Inputs Exhibits Stable Electrophysiological Properties and Morphology / 511

Susan E. Fahrbach, Andre W. DeLorme, Kathleen A. Klukas, and Karen A. Mesce

Electric Field-Directed Growth and Branching of Cultured Frog Nerves: Effects of Aminoglycosides and Polycations / 523

L. Erskine, R. Stewart, and C. D. McCaig

Purkinje Cell Dendritic Arbors in Chick Embryos Following Chronic Treatment with an N-Methyl-D-Aspartate Receptor Antagonist / 537

Michael W. Vogel and Jennifer Prittie

Differential Delay of Reinnervating Axons Alters Specificity in the Rat Serratus Anterior Muscle / 553

Wade A. Grow, Eydie Kendall-Wassmuth, Catherine Ulibarri, and Michael B. Laskowski

Naturally Occurring Motoneuron Cell Death in Rat Upper Respiratory Tract Motor Nuclei: A Histological, Fast Dil and Immunocytochemical Study in the Nucleus Ambiguus / 563

David R. Friedland, Avrim R. Eden, and Jeffrey T. Laitman

**Proliferating Hair Cell Precursors in the Ear of a Postembryonic Fish Are Replaced
after Elimination by Cytosine Arabinoside / 579**
Joelle C. Presson, Tamara Smith, and Lynn Mentz

**Agrin mRNA Variants Are Differentially Regulated in Developing Chick Embryo
Spinal Cord and Sensory Ganglia / 585**
Enbo Ma, Rodney Morgan, and Earl W. Godfrey

Author Index to Volume 26 / 601

Subject Index to Volume 26 / 604

Volume Contents / 1